

MISSOURI. Conservationist

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Research Is Vital to Conservation

was filled with a mixture of excitement and hopeful anticipation. In the darkness, I eased the truck door shut, and my youngest daughter ensured we had all of our gear before heading afield. The day was Nov. 2, 2013 — the start of Missouri's youth deer season weekend.

A strong northwest wind helped cover the noise we made walking to our hunting spot. The brisk morning combined with the musky smell of fallen leaves signaled fall had officially arrived. We stopped to gaze at the stars

— the Little Dipper in the western sky seemed extra bright.

As we settled into our hunting spot, a coyote announced his nearby presence with a series of loud calls. Adequate hunting light was still several minutes away. We waited as nature's morning slowly continued to develop around us. I hoped the day would provide more opportunities and adventures for my daughter to appreciate Missouri's incredible wildlife resources. Our state's healthy forests and diverse fish and wildlife resources enhance our quality of life and have a significant positive impact on Missouri's economy. Conservation is a wise investment.

My mind drifted to conservation topics of the past week. Our research staff's briefings on diverse activities had captured my attention. Aerial flights to monitor the waterfowl migration, surveys of hellbender nesting success in Ozark streams, statewide quail whistle count results, catfish sampling reports from the Missouri and Mississippi rivers, brood survival rates of prairie chickens, and elk habitat use within the restoration area serve to show the variety of efforts underway. The Department continues a management approach based on technical research, an essential component to Missouri's continued long-term conservation success.

Research efforts for well-established, growing, and even possibly colonizing wildlife species are critical to making timely and wise management decisions. Examples of each of these three categories are wild turkeys, black bears, and mountain lions.

Missouri has a long history of conducting wild turkey research. As a top state in the nation for wild turkeys, research projects have provided important information on survival and harvest rates, as well as reproductive ecology, to help guide management decisions. This January, staff will initiate a multi-year effort to capture and place leg bands and radio transmitters on a few hundred wild turkeys, starting in the northeast region of Missouri. It has been several years since the last ma-



Conservation Department Director Bob Ziehmer and Resource Scientist Jeff Beringer

jor turkey research study. This priority project will improve the understanding of current population dynamics. Project results will be used to update the wild turkey management plan to help ensure Missouri remains a national leader.

Black bears are becoming an increasingly significant wildlife resource in our state. Most historical records suggest Missouri's black bear population was extirpated by the 1950s. Over the past decade, reports of bear sightings have become commonplace in southern

Missouri. Research to identify bear range and population characteristics was initiated in 2010. To date, 63 bears have been captured, and 54 were fitted with radio collars. GPS-equipped collars measure bear movements and home ranges. We learned that male bears covered an average of 127 square miles and females 40 square miles annually. Initial research places the state population estimate under 500 adult animals. Black bear research is now directed at measuring survival and productivity of females so staff can forecast the growth of the state's bear population.

Similar to other Midwestern states, Missouri continues to experience documented mountain lion sightings. DNA tests from collected hair samples show young male mountain lions are dispersing from western states, including South Dakota and Colorado. At this point, only males have been confirmed in Missouri; however, continued mountain lion dispersal from western states is anticipated. As a result, research is needed to help answer questions regarding mountain lions in Missouri. While the Department has no intentions of stocking mountain lions, research will allow staff to predict successful management approaches.

A gentle nudge from my daughter drew my attention back to the present. Deer had entered the field. It was a special moment watching them. Management efforts of Department staff, private landowners, and citizens, as well as building our knowledge base through research, have given Missouri world-class forest, fish, and wildlife — including our white-tailed deer herd. Research efforts are, and continue to be, an essential component of why Missouri is recognized as the national leader in forest, fish, and wildlife conservation.

Robert L. Ziehmer, director

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📷 500mm lens • f/4.0 • 1/400 sec • ISO 1600

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WHAT IS IT?

Our photographers have been busy exploring the intricacies of the Missouri outdoors. See if you can guess this month's natural wonder. The answer is revealed on Page 8.



SHELLY COLATSKIE

BIRD OUT OF TIME

Reading the article *Great Blue Heron* on Page 30 of the November issue brought back memories from long ago.

Near where I lived was a low area, which at that time had ditches on both sides of the road filled with water. One morning on the way to work there was a low cloud or fog, such that it was clear from the ground to about 6 feet high, then dense fog above that. It was like driving through a tunnel. As I drove I found that several herons were in the ditches, and as I went down that road one after another flew up out of them. Like Danny Brown said, they reminded me of pterodactyls. As they rose up with their huge flopping wings and disappeared into the fog it was like driving into the land before time or perhaps the Flintstones. Thank you, Danny, for the wonderful picture and bringing back old memories.

Richard Schneider, via Internet

BOOTHEEL EAGLES

I noted your article *Eagle Days Start Dec. 7* in the December issue [Page 6] did not mention the opportunity to see eagles in Dunklin County, or any of the Bootheel except Mingo NWR.

The Bootheel region is a great place to see eagles. As long as the wintering waterfowl are present, it is common to see several eagles in the lowland fields during a casual drive along any of the back roads in the region. Find some ducks or geese in the area, and you will find eagles.

My farm is in the south end of Dunklin County, close to the Little River Ditches, and I see eagles daily. Often the eagles are close enough to the county roads that binoculars are not needed. The area is flat, the wintering ducks and geese are numerous and easy to find, and the eagles can be seen from a distance. Then all one has to do is drive to where the eagles are for a up-close encounter. It's common to see several

eagles in a day, throughout the winter months and into the spring.

Kent S. Freeman, Kennett

MISSING HOUSE FINCH

You missed the pretty song of the house finch in your article *Backyard Birds* [November; Page 10]. As well, you recommended black sunflower, white millet, and niger. You missed the safflower seed; we serve it regularly, and it seems the black birds and the starlings cannot open it. The chickadees, the finches, the titmouse, doves, blue jay, cardinal, junco, nuthatch, and gold finches all can. Keep the good articles coming.

Jay McClelland, Springfield

Editors' Note: Certainly the house finch was an option for an article about bird feeding, but, for the 14 bird species selected for the article, representing suet, sunflowers, mixed seed, fruit, and nectar, we could have included another 20 regular feeder birds, too. Though the house finch missed the cut on this particular article, we are no less fond of this charming visitor. Learn more about them at mdc.mo.gov/node/19947. While safflower's thick shell deters some birds, it is a favorite of others, especially cardinals and grosbeaks, and it can be a good addition to your seed offerings.

FROM FACEBOOK

I want to learn more about selling fur. Is there a good website to go to? I would like to know what fur buyers' expectations are.

Willie Nelson

Conservation Department: Here is a link to our trapping information: mdc.mo.gov/hunting-trapping/trapping.

Is it legal to take/keep those huge hornets' nests you see in the trees?

Lorna Jaye

Conservation Department: It is not from conservation areas. On private land it is up to the landowner. Be careful and wait until you are sure all of the hive is dead.



Reader Photo

DEER DAZE

Melissa Harding of Lincoln County, Mo., took this photo of a deer at Cuivre River State Park. Harding visits August A. Busch Conservation Area frequently, but on the day this photo was taken she says, "It just happened to be a day I wanted to try out a different place, so my cousin and I went for a drive." Harding is an avid photographer and takes pictures of many different kinds of subjects. "I love being outdoors," she says. "Whether I'm fishing, hiking, or camping, my camera is always close by."



DEPARTMENT HEADQUARTERS

Phone: 573-751-4115
Address: PO Box 180,
Jefferson City 65102-0180

REGIONAL OFFICES

Southeast/Cape Girardeau: 573-290-5730
Central/Columbia: 573-815-7900
Kansas City: 816-622-0900
Northeast/Kirksville: 660-785-2420
Southwest/Springfield: 417-895-6880
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SUBSCRIPTIONS

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OMBUDSMAN QUESTIONS

Phone: 573-522-4115, ext. 3848
Address: Ombudsman, PO Box 180,
Jefferson City 65102-0180
E-mail: Ombudsman@mdc.mo.gov

EDITORIAL COMMENTS

Phone: 573-522-4115, ext. 3847 or 3245
Address: Magazine Editor, PO Box 180,
Jefferson City 65102-0180
E-mail: Magazine@mdc.mo.gov

READER PHOTO SUBMISSIONS

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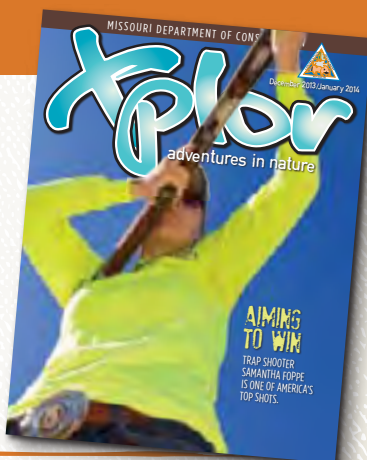
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Editor In Chief Ara Clark
Managing Editor Nichole LeClair Terrill
Art Director Cliff White
Staff Writer Jim Low
Photographer Noppadol Paothong
Photographer David Stonner
Designer Stephanie Thurber
Circulation Laura Scheuler

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"Rabbits don't hibernate. You're just lazy!"

Agent Notes

CSI Conservation

CONSERVATION AGENTS ARE tasked with enforcing the *Wildlife Code* to protect Missouri's forest, fish, and wildlife. Regulations enforcement sometimes means routine assignments with little need for assistance. Occasionally though, agents come across crime scenes similar to ones seen on television. With some help from forensic scientists, these scenes can hold vital information that a conservation agent can use to solve the case.

In 2009, the Missouri Department of Conservation teamed up with a DNA forensic laboratory at the Center for the Conservation of Biological Resources/WestCore at Black Hills State University to aid in gathering DNA on Missouri's white-tailed deer population and its genetic diversity. In 2010, the database was put to the test when a conservation agent arrested two suspects for a wildlife violation. WestCore used a blood sample from a dead deer to see if it matched a sample taken from one of the suspect's boot. These samples were a match. WestCore reported that based on a local database of white-tailed deer DNA, the likelihood that another white-tailed deer would randomly result in the same DNA genotype is less than 1 in 3.6 quintillion! That DNA report was the first of its kind used in a wildlife case in Missouri. Based on the report, the court sided with the State of Missouri and issued a guilty verdict.

Since 2009, the Department has started other DNA databases for species such as black bear and elk. The Department continues to be a forward-thinking agency



HUNTING AND FISHING CALENDAR

FISHING	OPEN	CLOSE
Black Bass from Ozark Streams	05/25/13	02/28/14
Nongame Fish Giggling	09/15/13	01/31/14
HUNTING	OPEN	CLOSE
Coyote	05/06/13	03/31/14
Crow	11/01/13	3/03/14
Deer		
Archery	11/27/13	01/15/14
Firearms		
Alternative Methods	12/21/13	12/31/13
Late Youth	01/04/14	01/05/14
Furbearers	11/15/13	01/31/14
Pheasant		
North Zone	11/01/13	01/15/14
Quail	11/01/13	01/15/14
Rabbit	10/01/13	02/15/14
Squirrel	05/25/13	02/15/14
Turkey		
Archery	11/27/13	01/15/14
Waterfowl	see the <i>Waterfowl Hunting Digest</i> or mdc.mo.gov/node/3830	

TRAPPING	OPEN	CLOSE
Beaver and Nutria	11/15/13	03/31/14
Furbearers	11/15/13	01/31/14
Otters and Muskrats	11/15/13	02/20/14

For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code* and the current summaries of *Missouri Hunting and Trapping Regulations* and *Missouri Fishing Regulations*, *The Spring Turkey Hunting Regulations and Information*, *the Fall Deer and Turkey Hunting Regulations and Information*, *the Waterfowl Hunting Digest*, and *the Migratory Bird Hunting Digest*. For more information visit mdc.mo.gov/node/130 or permit vendors.

Operation Game Thief

Help put game thieves out of business. If you see a possible violation in progress, call your county conservation agent immediately or dial the toll-free number below:

1-800-392-1111

All information is kept in strict confidence. Desirable information includes names of violators, vehicle description and license number, as well as the violation location.

providing wildlife management and protection based on scientific knowledge.

David Baldrige is the conservation agent in Carter County. If you would like to contact the agent for your county, phone your regional conservation office listed on Page 3.

ASK
THE

Ombudsman



Ring-billed gull

Q. I was surprised to see seagulls around a marina at the Lake of the Ozarks this winter. What are they doing in Missouri?

The term “seagull” is often used for any of several species of gulls. In reality there are some gull species that have very little association with oceans. These are more appropriately referred to as inland gulls. The most common of these in Missouri is the ring-billed gull, named for the black band near the tip of its yellow bill. That species breeds in the northern U.S. and Canada and overwinters in the Atlantic coastal states, the southern states to the west coast, and in Mexico. They are found in Missouri during migration and some overwinter

here, feeding opportunistically on fish, insects, worms, or garbage. They can be seen in areas such as parking lots, garbage dumps, newly plowed fields, wetlands, or near fast-food restaurants, large rivers, or reservoirs.

Q. After catching a largemouth bass or trout and releasing it, how soon will those fish bite an artificial lure again?

I cannot give a definite answer to that question, but it would not be unusual to catch the same fish that you had caught

10 or 15 minutes earlier. That might be even more likely if you had changed your lure or fly during that time. Fish have a limited capacity for memory based on their experience. If the fish is still hungry, it's likely that it will continue to be fooled by an artificial lure and not make the connection with what happened previously when it did the same thing. That is fortunate for anglers because many fish are voluntarily released after being caught or are released due to not meeting length limits.

Q. Is there any permit needed to keep shed deer antlers that I find?

There is no permit required to keep shed antlers. On public lands, there may or may not be restrictions on taking shed antlers, depending on the managing agency. You are free to take them from conservation areas and from national forest lands in Missouri. They may not be removed from state parks or national wildlife refuges. Antlers found still attached to the skull must be reported to a conservation agent within 24 hours to receive possession authorization.



Ombudsman Tim Smith will respond to your questions, suggestions, or complaints concerning the Conservation Department.
Address: PO Box 180, Jefferson City, 65102-0180
Phone: 573-522-4115, ext. 3848
Email: Ombudsman@mdc.mo.gov



Forest Nursery Offers More Ordering Flexibility

Winter is prime time for planning habitat improvement projects, and George O. White State Forest Nursery now offers more flexibility than ever in ordering seedlings for wildlife plantings. As always, the Conservation Department's nursery at Licking has a wide variety of tree and shrub species. This year's offerings include

14 oak species, seven evergreens, black walnut, pecan, tulip poplar, bald cypress, black cherry, persimmon, pawpaw, dogwoods, deciduous holly, plum, ninebark, witch hazel, mulberry, elderberry, and much more. Prices range from 16 cents to 80 cents each, depending on species, size, and quantity. Seedlings are available in

bundles of 10 of one species, as they were last year. This year, however, in response to customer requests, you also can order bundles of 25 plants of one species.

Couple Donates Land in Dunklin County

A donation of 44 acres to the Missouri Department of Conservation made by Dan and Pam Haynes of Roscoe, Ill., is an addition to Wilhelmina Conservation Area (CA) in Dunklin County. Dan's parents, Curtis and Louise Haynes, bought the tract and other land in Dunklin County in the mid-50s and moved their young family to Missouri from Arkansas.

"I just think it's a good fit for the 40 acres to be in the hands of the Conservation Department and a way to honor my folks," Dan said. "It was hard for us to access some of the property because of the Wilhelmina Cutoff and this way the land can be under the stewardship of the Department. When I was a kid the surrounding land that was later acquired by the Conservation Department was known as the 'Armstrong Cork' property. I have good memories of hunting and walking the property. This will be a chance for the 44 acres to be used and enjoyed by others."

"This generous donation will allow the tract to be returned to the native bottomland hardwoods it once was and will provide valuable forest wildlife habitat that is sorely lacking in much of Dunklin County," said Wilhelmina CA manager Mark Pelton. "Folks coming to the property might see deer, beaver, waterfowl, and a lot of songbirds. Signage has been erected on the tract to acknowledge that the property was donated by the family of Curtis and Louise Haynes in their memory."

Wilhelmina CA is north of Campbell on Highway 53, then 4.5 miles west on Route DD, and west again on County Road 203.

Visit mdc.mo.gov/node/23263 for more information on land donations that are helping conserve Missouri's natural resources.

Wanted: Your Ideas

Do you have ideas about how your conservation areas are managed or what should be done to protect Missouri's deer herd? We want to hear them.

The Conservation Department is working to update management plans for all its areas.

New plans are posted monthly at mdc.mo.gov/node/19573. They remain there for 30 days, when a new batch is posted. After reviewing a plan, you can leave comments by following the link provided for that purpose. Your comments will be considered before plans are finalized. You can sign up at mdc.mo.gov/user_mailman_register to receive email notification when new plans are posted for comment or finalized.

We also want to know what you think should be done to protect Missouri's white-tailed deer from infectious diseases, such as chronic wasting disease. This is important, not only because of the \$1 billion in economic activity that deer hunting and watching generate annually in Missouri, but because of the treasured traditions associated with deer. Background information is available at mdc.mo.gov/node/17901. The same page has a comment form so you can weigh in on this important subject. Comments will help the Conservation Department develop policies supported by citizens like you.

Topeka Shiner Restoration

Biologists watched with hope as 3,300 hatchery-reared minnows of the endangered Topeka shiner swam away in ponds and a creek in Harrison County in northwest Missouri. A decades-long effort to protect and restore a fish that evolved in prairie streams now has fresh fins in the water.

"Our goal is for them to eventually not be endangered," said Jerry Wiechman, a fisheries management biologist for the Conservation Department.

Department fisheries crews and conservation partners released the Topeka shiners Nov. 6, 2013, at Dunn Ranch and at the Department's Pawnee Prairie Natural Area. Both are in the Grand River Grasslands, a combined public and private prairie restoration effort spanning 70,000 acres in Missouri and Iowa.

Prairies nurture fish as well as birds, wildlife, wildflowers, and native grasses. Topeka shiners were once common in waters in prairie states. Their numbers are in sharp decline for reasons biologists don't fully understand, though they know most native prairie is gone and development has greatly changed the habitat.

For the past two decades, the Department has worked with the U.S. Fish and Wildlife Service on a recovery plan for Topeka shiners

because fish are part of a prairie's natural web of life. The shiner restoration is also a partnership with The Nature Conservancy of Missouri, which owns Dunn Ranch.

"This restores another piece of a functioning prairie ecosystem," Todd Sampsell, the Conservancy's Missouri director, said. "We're thrilled. To us it's a testament to how a healthy prairie can keep a prairie stream healthy."

Topeka shiners, silvery and growing up to 3 inches long, can survive in creek pools during drought, Wiechman said. But they've dwindled to populations in only two streams in Missouri. Topeka shiners are on the state's endangered species list but also federally endangered due to declines in other states. Those released in November were raised at the Department's Lost Valley Fish Hatchery at Warsaw, but the parent stock came from a surviving native population in Sugar Creek in Harrison County.

The hatchery-raised shiners are considered a nonessential, experimental population by the U.S. Fish and Wildlife Service. That designation means there will be no restrictions or regulations that affect property owners in areas where they are released. Future plans call for additional



Topeka shiner

Topeka shiner releases until the state has seven watersheds with self-sustaining populations. Those releases will also be nonessential, experimental populations.

Natural life is interconnected — species, land, and water. Conservation saves those connections for future generations of people to enjoy.

"It's our job to protect diversity for all species in Missouri," Wiechman said. — *by Bill Graham*

Monster Trout Haunts Lake Taneycomo

Anglers looking for a state-record fish might catch a state-record fish almost anywhere in the Show-Me State. But dozens of anglers who witnessed the catch and release of a 31-inch rainbow



CONSERVATION COMMISSION ACTIONS

The October Commission meeting featured presentations and discussions regarding wild-turkey harvest management, permit sales trends, small-lake management in northeast Missouri, spring turkey hunting regulations, and Union Ridge Conservation Area. A summary of actions taken during the Oct. 3–4 meeting for the benefit and protection of forest, fish, and wildlife, and the citizens who enjoy them includes:

Land Changes

- » **Approved** the designation of a new natural area in Vernon County as Prairie View Natural Area (NA) and an addition to Dark Hollow NA in Sullivan County.
- » **Approved** the sale of land in Washington, Franklin, and Grundy counties that totaled 10.64 acres.
- » **Approved** the purchase of land in Shannon, Christian, Morgan, and Benton counties that totaled 661 acres as additions to existing conservation areas.

The next Conservation Commission meeting is Jan. 23 and 24. For more information, visit mdc.mo.gov/node/3430 or call your regional Conservation office (see Page 3).

(continued from Page 7)

trout on Nov. 2 can attest to the fact that a state record still almost certainly haunts the tailwaters of Lake Taneycomo.

Oklahoman Mark Clemishire travels to Forsyth, Mo., during the first week of November each year to fish below Powersite Dam with guide Brett Rader. They “sight-fish,” casting to big trout, whose fall spawning run brings them into shallow water below the dam. Clemishire reportedly tempted the hook-nosed rainbow trout with a tiny fresh-water shrimp imitation. That launched a 20-minute battle, during which Clemishire followed the fish up, down, and across the stream, begging other anglers’ indulgence as he tried desperately to prevent the fish from breaking

the 3.5-pound-test leader that connected him to his prize. Applause broke out when Clemishire brought the fish to net. He and Rader rushed to measure the fish so they could release it alive. The vital statistics: 31 inches long, with a girth of 23 inches.

A formula for calculating approximate weight of large fish indicates the fish weighed around 20.5 pounds, well over the current pole-and-line state record of 18 pounds, 1 ounce.

Clemishire knew that not weighing his fish meant he would not qualify for a state record. But he also knew the fish was unlikely to survive if he kept it out of water long enough to get it to a certified scale. The fish seemed strong as it swam

away, and if another angler manages to tie into it, he or she can thank Clemishire.

Clemishire can receive a Master Angler certificate, however, and he has a once-in-a-lifetime memory. To find out about the State Fishing Records and Master Angler programs, visit mdc.mo.gov/node/2476.

In 2005, the Conservation Commission approved a new protective slot limit and creel limit for rainbow and brown trout on parts of Lake Taneycomo. The benefits of the regulation are beginning to surface in Department surveys and angler creel surveys. Anglers, guides, and bait shops have also noticed an increase in larger trout at Lake Taneycomo.

Missouri offers world-class trout fishing at four trout parks, 120 miles of spring-fed trout streams, Lake Taneycomo, and winter trout areas in nine cities. Nearly 2 million trout, produced by Department hatcheries and the Neosho National Fish Hatchery, are stocked each year. Lake Taneycomo receives 700,000 catchable trout per year from the Conservation Department’s Shepherd of the Hills Hatchery and the Neosho National Fish Hatchery.

More Good News for Hellbenders

Missouri hellbenders have been on a roll, and the good news just keeps on coming.

Hellbenders are North America’s largest salamanders, growing to lengths approaching 2 feet. Missouri has two hellbender species, the Ozark hellbender and the eastern hellbender. The eastern hellbender inhabits streams in the Ozark Plateau region that drain into the Missouri or Meramec river drainages. The Ozark hellbender inhabits streams of the White River drainage. Numbers of Ozark hellbenders have decreased by 70 percent since the 1980s, leading to its being added the list of federally endangered species.

The Conservation Department has been working with the St. Louis Zoo to raise young hellbenders bred in captivity and collected from eggs in the wild. Because lack of suitable nesting sites may be one of the problems facing hellbenders, propagation efforts included designing and installing artificial nest boxes in streams. When hellbenders use these structures, researchers are able to remove some of the eggs to boost genetic diversity of stock used in captive-breeding efforts.



WHAT IS IT?

Indiana Bat | *Myotis sodalis*

On Page 1 is a photo of thousands of bats hibernating together, and above is a close-up of a single Indiana bat. Indiana bats hibernate in clusters of several hundred to several thousand in cool caves. Of Missouri’s 6,500 known caves, only 27 have ever had sizeable Indiana bat populations. Listed as Endangered, Indiana bat conservation methods include avoiding disturbing hibernating bats, maintaining cave habitats, and improving streamside habitats. The bats emerge from hibernation in early spring. Indiana bats summer along streams and rivers in north Missouri, raising their young under bark of certain trees. They eat primarily moths but also mosquitoes and aquatic insects. — photo by Shelly Colatskie

DID YOU KNOW?

Conservation makes Missouri a great place to trap.

From 2010 through 2012, they succeeded in rearing three clutches of hellbenders in artificial nest boxes. This year, they nearly tripled that number, bringing off eight clutches. This program is successful based on the number of hellbender nests found in the wild. 2012 was a banner year, with 15 nests found. In 2013, the number jumped to 20.

In 2012, the St. Louis Zoo had five clutches deposited in the outdoor raceways at the zoo. They also succeeded for the first time in getting hellbenders to lay eggs in the indoor raceway. All eggs deposited in the raceways were in the artificial nest boxes.

Probable causes of the Ozark hellbender's decline include degraded water quality, habitat loss, predation, and illegal collection for the pet trade. Also threatening the Ozark hellbender are a fungal disease and physical deformities. The average age of Ozark hellbender populations is increasing and few young are being found, indicating problems with juvenile survival since we know the animals are successfully producing eggs in the wild.

Discover Nature Schools Goes to the Science Fair

Recognition for outstanding nature-related science fair projects is available again this year through the Discover Nature Schools (DNS) program. No extra work or travel is involved. Teachers simply email photos and descriptions of projects for judging. Winners receive ribbons, medals, or plaques for their achievements, and four state winners will receive classroom equipment used to deliver DNS at their school.

Teachers, not students, must submit entries for the DNS Science Fair competition. Submission criteria have been simplified and shortened this year. To qualify, students must be enrolled in a class teaching a science unit that is part of the Conservation Department's DNS. Entries must show a connection to at least one DNS activity. DNS does not have to be mentioned in the project. However, entries must meet criteria listed on the Academy of Science-St. Louis Science Fair website, sciencefairstl.org.

The competition takes place in three rounds. Round 1 is judged by teachers at participating schools. Teachers submit winning entries for

Trapping in Missouri

» **Trapping provides** recreation, is a research tool, and helps manage Missouri's wildlife in a manner that is safe, wise, and humane.

» **Trapping regulations** are determined by the Conservation Department and published each year in the *Wildlife Code of Missouri* or in *A Summary of Missouri Hunting and Trapping Regulations* or online. To view copies of these regulations or to purchase permits, visit your regional Department office (see Page 3) or visit mdc.mo.gov.

» **Trapping ethics** guide responsible trappers, and those are:

- Obtain landowners' permission to trap on their land.
- Avoid setting traps in areas where domestic animals may be caught.
- Set traps to target animals in the most humane way possible.
- Check traps regularly and preferably in the early morning.
- Identify and record trap locations carefully and accurately.
- Dispose of animals properly so as not to offend others.
- Make an effort to trap only the surplus animals from each habitat.
- Promptly report the presence of diseased animals to wildlife authorities.
- Assist landowners who are having wildlife damage problems.
- Support the training of new trappers and the enforcement of trapping regulations.
- Obtain all required licenses, tags, and permits from the Missouri Department of Conservation before setting traps.

» **Trapping seasons include:**

Season	Opens	Closes
Badger	11/15/13	1/31/14
Beaver and Nutria	11/15/13	3/31/14
Bobcat	11/15/13	1/31/14
Coyote	11/15/13	1/31/14
Fox (Red or Gray)	11/15/13	1/31/14
Mink	11/15/13	1/31/14
Opossum	11/15/13	1/31/14
Otters and Muskrats	11/15/13	2/20/14
Rabbit	11/15/13	1/31/14
Raccoon	11/15/13	1/31/14
Striped Skunk	11/15/13	1/31/14

» **For more information** about trapping, please visit your regional Department office (see Page 3) or visit mdc.mo.gov/node/3097.

Round 2 by March 15. Conservation Department education consultants judge Round 2 and send winners on to Round 3, which is judged at the Conservation Department's Central Office in Jefferson City by May 1.

The Discover Nature Schools Program is taught in nearly three-quarters of Missouri school districts, and the program continues to grow every year. To learn more, visit mdc.mo.gov/node/19569.



ICE FISHING MISSOURI

**Extend your
angling season and
enjoy the tastiest
catch of the year.**

BY TORY MASON
PHOTOGRAPHS BY DAVID STONNER



F

OR MOST NORTHERN MISSOURI

anglers, frozen lakes and ponds symbolize the end of the fishing season. For some, however, the “hard water” season in Missouri is the beginning of one of the best fishing periods of the year.

Anglers who brave the colder temperatures quickly realize the great opportunity to extend their fishing season. It shouldn't be a surprise that the number of ice anglers is on the rise in our state. Missouri has great fishing for panfish.

The numerous small lakes and ponds in Missouri, many of them public, offer exceptional bluegill and crappie angling for both numbers and size, and ice fishing is one of the cheapest and simplest types of angling. There are no boats or expensive gear requirements, and great fishing is accessible for anyone who is willing to walk, sometimes even just a few strides from shore. Also, the fish are reasonably easy to catch and, taken from very cold water, fish fillets of any species taste as good as they ever will.

If you have ever thought about trying ice fishing, but didn't know where to start, here are the basics.

SAFETY FIRST

“Is the ice safe yet?” is the first question to ask, and the most important consideration. It is impossible to determine if ice will hold you just by the appearance from the bank. Ice strength is determined by such factors as ice thickness, daily temperature, snow cover, depth of



Most ice-fishing opportunities in Missouri are on small lakes or farm ponds.

water under the ice, size of the lake, wind, current, and wildlife activity.

Wait to walk onto the ice until local high temperatures have been well below freezing (32 degrees) for several days. With your fishing buddy (never ice fish alone), go out 3 or 4 feet

from the bank and make a hole. If there is at least 4 inches of ice, continue another 10 or 15 feet and make another hole. If everything is still safe and you feel comfortable, keep going, opening holes every 50 feet to make sure ice thickness hasn't changed. Remember: ice rarely forms in uniform thickness. It can be 6 inches in one spot, and 2 inches just a few feet away. An example is areas that have been kept open by ducks and geese. Always be aware of the type of ice you are drilling through, and distinguish between ice and snow. Snow on top of ice does not help ice freeze faster, rather it insulates it, shielding the surface of the lake from cold temperatures. The best ice is hard, clear ice you can see through.

EQUIPMENT

When cold temperatures do come, the first thing an ice angler needs is something to make a hole in the ice. Augers, axes, and ice picks can all do the job of making a 6- to 8-inch diameter hole. Making a larger hole might seem like a good idea, but I would advise against it since wider holes have the tendency to attract the boots of anglers' feet, and wet feet in the winter time will ruin a fishing trip rather quickly. Six- to 8-inch holes are plenty wide enough to fit even the biggest of Missouri's panfish. Although expensive power augers are available from many retailers, affordable hand-held augers are all that are necessary in Missouri since ice thickness rarely gets more than 12 inches, even in the harshest of winters in the northern part of the state.



A 6- to 8-inch hole is wide enough for Missouri ice fishing. An auger, axe, or ice pick will get that job done.



The most common ice fishing tackle includes a small, 2- to 3-foot jigging stick with an ultra-light reel, very light line, and small $\frac{1}{64}$ -ounce jigs. Ice fishing poles can be homemade setups assembled from broken gear, cheaper plastic ice fishing rod and reels, or more expensive rod and reel combos. Check all your usual outdoor catalogs for the latest.

Throw your rods in that extra 5-gallon bucket you have in the garage, and you have yourself a gear transporter, a place to throw your fish, and a seat — all in one.

For bait, most successful anglers use live bait, such as wax worms, which are the small white larvae of the greater wax moth, and small minnows like fatheads and shiners. Wax worms can be hard to find some years because the ice-fishing season varies in duration from year to year. However, bait shops can order them for you, or there are many online stores. Adventurous anglers can also

The number of ice anglers in Missouri is on the rise.

raise their own wax worms at home. Wax worms are hardy creatures and may last you into the spring if care is taken. Leftovers will work during the spring just as well as on the ice.

Other popular bait options are Berkley power bait nibbles, Gulp! scented products, jigging spoons, jigging Rapalas, or very small plastics. Always keep in mind that using the smallest presentation possible with the lightest line you can find gives you the best shot at being successful.

The most popular and active species during the winter months are bluegill and crappie. Many ice anglers are also surprised that largemouth bass and channel catfish are active during the winter. I know many anglers who throw back 8-inch bluegills in the summer while they are fishing for other species. Those same anglers, however,



Black crappie

after getting introduced to the tug of a large bluegill on a light, 2-foot-long ultralight fishing rod, will now walk a mile through snow drifts to ice fish a pond full of eater-sized bluegills. There is something almost addictive about feeling that light tap, setting the hook, and pulling a fish through a 6-inch hole at your feet. If the sporting fight of a large, circling bluegill below the ice doesn't turn you into an ice angler, the fresh fried bluegill dinner when you get home will seal the deal.

LOCATION

Most ice-fishing opportunities in Missouri are on small lakes or farm ponds, but good fishing can be also be found on city lakes, where allowed (be sure to check regulations first). I would try your favorite farm pond first. Many farm ponds are in need of some harvest to help balance the fishery. Whether the pond has a stockpiled bass population, or bluegill aren't harvested often, fishing is a key management tool for a healthy pond fish population.

Ask your friend or relative if taking a few fish out of their pond is ok, then find the deepest part of the pond, easily located adjacent to the pond dam. During win-



Many ice anglers use wax worms for bait. They can be hard to find some years because the ice-fishing season varies, but bait shops can order them for you.

ter, fish stage in deep water over mud bottoms, gorging themselves on small aquatic organisms living in the mud.

Start by placing your bait 6 to 12 inches off the bottom, and keep the bait moving with very subtle twitches of the

“Memories Make the Best Presents, but They Are Hard to Wrap!”

BY PHILLIP PITTS

IF YOU HAVE A FEW YEARS UNDER YOUR BELT, think back to your special memories of mom and dad. Or think about the most fun days you had with your brothers, sisters, cousins, and friends. I'll bet one of those memories is of a fishing trip where everything went great. Or, perhaps where everything went so wrong, all you could do was laugh. I'll wager there is no amount of money you'd exchange for that picture in the family album of the proud, smiling faces with the catch of that day long ago.

Since 1990, the Missouri Department of Conservation, often in cooperation with the local city government, has been providing an opportunity to make one of those priceless memories with its winter trout fishing areas at 28 lakes throughout the state.

Each year, around the first of November, the Department stocks rainbow trout in five lakes in the Kansas City area and 16 lakes in the St. Louis area, as well as lakes in Jefferson City, Mexico, Sedalia, Kirksville, Columbia, Jackson, and St. Joseph. The Kansas City lakes and some of the lakes in St. Louis are stocked several times throughout the winter. Most of the stocked trout are about 12 inches long and weigh three-fourths of a pound, but a few of the trout stocked in each lake are lunkers (about 4 pounds) that have served as brood

stock at Department hatcheries for several years.

The trout is a cold-water fish and provides excellent fishing in the winter when other fishing possibilities are more challenging. For a couple of weeks after the trout are first stocked, they have not learned to be wary of anglers and hooks. The trout are hungry and readily bite any lure that passes within reach. Catching lots of fish in a short time is pretty common right after stocking.

Fourteen of the lakes have a catch-and-release season for about three months prior to Jan. 31. During the catch-and-release season, only unscented, artificial lures can be used

“Fish come and go, but it is the memory of afternoons on the stream that endure.”

—E. DONNALL THOMAS

for bait. Beginning Feb. 1, anglers can use live worms, cheese bait, crickets, etc. After a few months in a lake crowded with lots of other fish, the trout are very hungry and cooperative. Once again, the fishing in these lakes is great for a short while and, if you have a trout permit, you can keep up to four tasty trout, too.

So, think about it. Have you made one of those memories for a child in your family yet? Now is the time! Get your rods and reels in shape. Buy some small hooks and trout bait. If you plan

rod tip. If a fish is close, they will bite. If you fail to find fish in the deep end of your pond, check a little shallower, or drill a hole next to your favorite brush pile. Although not a requirement, modern flashers like the Vexilar and portable LCD fish finders allow anglers to easily check the depth and find concentrations of fish, eliminating the guess work that comes along with any type of fishing. Use these same guidelines to find fish in small- to medium-sized public lakes.

Next time you have cabin fever in midwinter, and you are pining for the spring fishing season to start, get out there and give ice fishing a try. Not much compares with bringing a nice fish up through a small hole in the ice,

and absolutely nothing beats a meal of freshly caught winter panfish. Pick a comfortable sunny day on a pond or lake with safe ice and an abundant population of bluegill or crappie, and you will be hooked on ice fishing. And if you can, bring a kid along. Christmas break offers the perfect time to spend some quality time. Ice fishing provides the fast and furious action needed to keep a young angler interested, and you may just make a fishing partner for life. ▲

Tory Mason has been a Department fisheries management biologist for Andrew, Holt, Atchison, and Nodaway counties for 10 years.



Phillip Pitts and his brother after a successful fishing day, in 1960.

on ice fishing, check if it is allowed at your local lake. Get your fishing license and trout permit and don't forget your camera. Years from now, as your loved ones look at the picture from that special day, they will smile and recall it fondly. They might think that day just happened, but you'll know you made it happen. You gave them a special, priceless gift worth more than any fancy electronic toy or the latest fashion — and made some great memories for yourself, too.

Phil Pitts has been a fisheries management biologist since 1997. He currently works in Cole, Moniteau, Cooper, Osage, Maries, Gasconade, Howard, and Saline counties.

PHOTO COURTESY PHILLIP PITTS

Kids in Nature

PHOTO CONTEST

Winners

➔ Whether fishing, hiking, camping, hunting, photographing, looking for creatures, or just playing in nature,

Missouri kids are having fun outdoors. The photos and stories from this year's Kids in Nature contest showed how much Missourians of all ages appreciate and support our great conservation heritage.

"Our main goal was to encourage people to get outside with their families, and then to share their experiences with others," says Cliff White, the *Conservationist's* art director. "That is also why we conducted this contest through a social networking site. Though we are only recognizing our 10 monthly winners here, be sure to check out all the great entries on Flickr at flickr.com/groups/mdc-kids-in-nature."

We hope you will find these images from our monthly winners as inspiring as we do. Congratulations to the winning families, and thank you to everyone who participated.

Be sure to check out our new Discover Nature section (Page 33) to learn this year's photo contest theme and details.



➔ Diana Hughes captured this photo of her 2-year-old charge, Evan Dale Edwards, playing in the leaves on one of their many walks in Blue Springs, Mo. Hughes is "Grandma" Diana to Edwards, and watches him during the day while his parents, Kerri and John Edwards, of Lee's Summit, are at work. "We both enjoy going on walks together, and we

October Winner

PHOTO BY
DIANA HUGHES

especially enjoy our trips to Burr Oak Woods Conservation Area and Nature Center," says Hughes. "There, Evan enjoys the snakes, fish,

turtles, and activities in the center, along with a nice walk on the nature trail." The Edwards enjoy camping, and Evan especially enjoys nature hikes, collecting rocks, and riding his bike and tractor. Hughes says her family also enjoys hiking and camping throughout Missouri.



May Winner

PHOTO BY
ROBYN GIBBS

📷 Robyn Gibbs took this picture of her 2-year-old daughter, Ravyn, photographing flowers in Foristell, Mo. “She loves being outdoors camping, rock hunting, and especially hiking,” says Gibbs.

She says her family loves outdoor adventures and exploring Missouri’s natural beauty. “I love taking pictures,” says Gibbs, “and I was astonished to see her interest in photography at such a young age.”

Kids in Nature PHOTO CONTEST *Winners*



February Winner

PHOTO BY
TODD PRIDEMORE

↑ Titus Pridemore found this antler shed in a small food plot near his Boone County home. “I had discovered the shed antler in this small food plot a few days after Christmas Day,” says Titus’ dad, Todd Pridemore. “But, I left it

where it was so one of my boys could have the fun of discovering it for themselves.” The entire family enjoys spending time in the woods hunting deer, turkey, and squirrels. “Titus and his older brothers, Josh and Andrew, all enjoy catching fish in the small pond in front of our house,” says Todd Pridemore.



April Winner

PHOTO BY
REBECCA BUNN

↑ Rebecca Bunn took this photo of her 2-year-old daughter,

Nora, expressing excitement over a caterpillar found in their backyard in Hillsboro, Mo. Nora’s brother, Carter, looks on. “The caterpillars were a daily nature study for our family in the spring,” says Bunn. “We enjoy exploring the wonders of our backyard, watching birds at birdfeeders, finding turtles under bushes, and listening to woodpeckers pound away on trees. I love sharing nature with my kids, especially at this age. Through their eyes, I really appreciate how something so simple can inspire such awe and inspiration.”



July Winner

PHOTO BY
RICH CARTER

Rich Carter submitted this image of his neighbor's son, Brett Lohmeyer, blowing out a marshmallow at a backyard campfire.

⬇️ Vallorie Francis took this photo of her son, Trusten, flying a kite on their farm in Edgerton, Mo. Francis says this was the first kite for Trusten, who is the second youngest of Francis' seven children. "He was so excited on that windy day to fly his first kite, because his younger brother was taking a nap and his older siblings weren't home from

school, yet," says Francis. "That meant he had it all to himself for a couple of hours." Trusten has always been an outdoor boy. "He can usually be found outside, in a mud puddle or a dirt pile," says Francis. "As a family, we go mushroom hunting in the spring, bike riding, fishing, and keep big gardens."



September Winner

PHOTO BY
 VALLORIE FRANCIS



August Winner

PHOTO BY
 KENT KEITNER

⬆ Kent Keitner of Galena, Mo., took this photo of his grandson, Levi Keitner, holding his first fish. Levi caught the fish on the James River during his first fishing trip. “While his dad, our son, was getting things ready to start fishing, Levi cast his line and immediately started reeling it in,” says Keitner. “His dad was shocked when Levi came up with his first fish!” Keitner says that Levi and his sisters love playing in and around the creek that flows behind their house and “doing just about anything outdoors.”

Kids in Nature PHOTO CONTEST Winners

➔ Scott Ziegler took this photo of his 7-year-old grandson, Ben LaMontagne, shooting a bow for the first time at their property near Owensville. “He can’t wait to join me and his mom deer hunting on our property,” says Ziegler. The entire family lives in St. Louis County, but the family visits the country property as often as possible. LaMontagne loves to visit the property to go fishing.

**November
Winner**

PHOTO BY
SCOTT ZIEGLER



**March
Winner**

PHOTO BY
JILL WILLIAMS

➔ Jill Williams took this photo of her husband, Chad, helping her son, Gage, tie a lure on his fishing line, while trout fishing at Bennett Springs State Park. “We usually go camping and fishing at Bennett Springs a couple of times a year,” says

Williams. She reports that Gage caught several trout that day. “Our family loves the outdoors,” says Williams. “We like to go camping, fishing, hunting, and floating. Gage’s favorite outdoor activity is exploring the outdoors with his dog, Gunner.”





➡ Mauri Truesdell took this photo of her granddaughter, Elsie Kresse, age 8, showing a young turtle to Truesdell's other granddaughter, Jade Kresse, age 3. After studying the turtle for a short time, it was released into suitable and safe habitat. "My family and I all

enjoy outdoor activities," says Truesdell. "We are a multi-generational family living together in Washington, Mo. We live just a few blocks away from the Missouri River and

June Winner

PHOTO BY
MAURI TRUESDELL

spend lots of time at the riverfront." Truesdell says they have participated in river cleanups and have planted trees along the riverfront trail.



Fiscal Year 2012–2013

ANNUAL REPORT



This Annual Report summary highlights the Missouri Department of Conservation's accomplishments and expenditures from July 1, 2012, through June 30, 2013. These accomplishments are based on the Department's five main goals. Not only does this summary highlight the accomplishments of the Department, but it emphasizes that Missourians care about conserving forests, fish, and wildlife; that we work with Missourians and for Missourians to sustain healthy forests, fish, and wildlife; that we help people discover nature; that conservation makes Missouri a great place to hunt and fish; and that conservation pays by enriching our economy and quality of life.

HEALTHY FORESTS, FISH, AND WILDLIFE

Elk Restoration

The Missouri Conservation Commission approved an elk restoration plan in October 2010. An elk restoration zone was established that included portions of Carter, Shannon, and Reynolds counties. In 2011, 39 elk that had been captured and transported from Kentucky were released on Peck Ranch Conservation Area (CA). In 2012, additional elk were captured in Kentucky and released at both Peck Ranch CA (19 adult elk plus 13 calves) and at The Nature Conservancy's Chilton Creek Preserve (14 adult elk). In 2013, 39 elk were captured and transported from Kentucky, one male calf was born en route, and all were released on Peck Ranch CA.

Paddlefish-Poaching Investigation

In March 2013, Department conservation agents, U.S. Fish and Wildlife Service (USFWS) special agents, and wildlife officers from other states contacted more than 100 suspects in Missouri and eight other states to issue citations, execute arrest warrants, conduct interviews, and gather information regarding paddlefish poaching. The arrests and citations were the result of a multi-year joint undercover investigation by the Department and the USFWS involving the illegal commercialization of Missouri paddlefish and their eggs for national and international caviar markets.

Drought Effects

Extreme drought took hold in 2012. Examples of how the drought affected the state's forest, fish, and wildlife include:

- **Wildfire Suppression:** Department staff worked with fire departments across the state to suppress 2,784 wildfires that consumed 27,209 acres.
- **Aquatic Resources:** There was a statewide increase in fish kills and excess vegetation in ponds. Staff provided landowners with information on how to minimize the drought's impacts and prevent similar problems in the future.
- **Deer:** Missouri experienced a widespread hemorrhagic disease (HD) outbreak in deer during the summer and fall of 2012 with a total of 10,177 suspected HD cases reported. Additionally, the low acorn crop increased deer harvest in southern Missouri, thus intensifying the population effects of the hemorrhagic disease outbreak in local areas.

Stocking Public Waters

- **Urban Fishing:** During 2012, 48 urban lakes were managed for fishing. A total of 149,082 keeper-sized fish were stocked in these lakes; this included 96,470 channel catfish and 52,612 rainbow trout.
- **Cold-Water Fish:** In 2012, cold-water hatcheries stocked 1,708,786 trout. Trout were stocked in four trout parks, 12



Department employees stock trout in urban lakes, such as this one at August A. Busch Conservation Area.

stream special management areas, and Lake Taneycomo. Trout parks sold 312,144 daily adult and 63,326 daily youth tags. Anglers purchased 94,894 annual trout permits.

- **Warm-Water Fish:** In 2012, 3.4 million fish were stocked in public waters. Fish stocked include hybrid striped bass, muskie, paddlefish, largemouth bass, hybrid sunfish, channel catfish, and walleye.

Feral Hog Eradication Efforts

Department staff in cooperation with state and federal agencies, conservation groups, agricultural organizations, and private landowners, including farmers, eradicated more than 1,000 feral hogs in Missouri as part of a five-year plan. The plan has developed cooperative relationships, assisted landowners, increased the number of hogs eradicated, and improved Department communications.

Hellbender Restoration

The Department's Shepherd of the Hills Hatchery in Branson and the Saint Louis Zoo's Ron Goellner Center for Hellbender Conservation, with support from other agencies and private citizens, worked together to keep Missouri's largest salamander from extinction through cutting edge efforts. Eight female Ozark hellbenders laid more than 2,800 eggs with about 2,500

of these successfully hatching into larvae. During the summer of 2012, 89 eastern hellbenders raised at the hatchery and 66 Ozark hellbenders raised at the zoo were released into their native Ozark rivers.

Black Bear Research Project

The Department completed a statewide black bear population estimation project in 2012. Our population work resulted in identifying 141 individual bears and an overall population estimate of 252 bears. Black bear distribution in southern Missouri appears patchy and restricted to areas of continuous forest such as the Mark Twain National Forest.

Furbearers and Trapping

During the 2012 fur hunting and trapping season, more than 9,000 trapping permits were sold — a 25-year high. Fur harvests during the 2012 season broke records with an all-time record harvest of bobcats, a second highest of all-time otter harvest, and the highest coyote harvest in 25 years.

Conserving All Wildlife

The Department initiated the development of a Comprehensive Conservation Strategy (CCS) in January 2012 to further improve habitat conservation for fish and wildlife. The Department evaluated the priority conservation opportuni-

ties across the state and selected eight places to potentially increase our investments in staff time, budget, and conservation partner energy. The CCS may be the first in the nation to fully integrate plans for forests, watersheds, and fisheries, and all other wildlife into a common framework for action.

MANAGE LANDS IN PUBLIC TRUST

Public Input on Area Plans

Conservation area management plans document strategies for natural resource management and public use on conservation areas. In fiscal year 2013, staff drafted 56 plans that cover 140 conservation areas and accesses. These draft plans will be available for a public comment period during fiscal year 2014. Public review of area plans will offer a new level of transparency to Missourians, with the opportunity for anyone to comment about the management of a specific conservation area.

Land Management

The Department maintained active management on Department lands — especially for quail and grassland birds and forest and woodland habitat. In fiscal year 2013, Department staff conducted habitat management on more than 182,000 acres of public land.

The Jay Henges Shooting Range earned a 4-star rating from The National Shooting Sports Foundation.



DAVID STONNER

RECEIPTS

Conservation Sales Tax	\$102,532,262
Permit Sales	\$31,983,335
Federal Reimbursements	\$26,543,555
Sales and Rentals	\$7,820,331
Other Sources	\$3,535,350
Interest	\$389,791
Total Receipts	\$172,804,624

State Forest Nursery

The Department's state forest nursery annually grows and distributes about 3 million seedlings of more than 60 species. The seedlings are planted on both public and private lands statewide. The nursery filled more than 10,700 orders involving more than 26,600 packages of seedlings, with a customer satisfaction rate of more than 99 percent. An open house and tour of the 100-acre nursery hosted more than 400 people in spring 2013.

Burr Oak Woods 30th Anniversary

The Department hosted events in October 2012 to mark the 30th anniversary of Burr Oak Woods Conservation Nature Center in Blue Springs. Burr Oak was the Department's first nature center. It hosts 80,000 visitors annually. The nature center features exhibits and interpretive programs, picnic areas, pavilions, five hiking trails, viewing/photo blind, and viewing decks and bridges.

Shooting Range Attains 4-Star Rating

The National Shooting Sports Foundation gave the Jay Henges Shooting Range near High Hill its enviable 4-star rating. Range improvements made in the past two years include creating a 15-target, 3-D, walk through archery range, and renovating the rifle and pistol range with state-of-the-art safety features and the capacity to capture and recycle all projectiles fired.

SOUND FINANCIAL ACCOUNTABILITY

Internships Encourage Diversity

The Department began its 10th year of an internship program. Objectives are threefold: expose students to a variety of professional tasks and the Department's culture, mentor students in disciplines in which job candidates are scarce, and attract students with diverse backgrounds to the Department's workforce. In fiscal year 2013, 12 students interned.

DISBURSEMENTS

County Assistance Payments	1.00%
Capital Improvements	9.06%
Fisheries	8.08%
Forestry	11.19%
Wildlife	12.22%
Outreach and Education	9.32%
Private Land Services	5.41%
Protection	9.68%
Resource Science	6.93%
Regional Public Contact Offices	1.34%
Administrative Services	15.14%
Human Resources	1.46%
Design and Development	7.33%
Administration	1.84%

MISSOURI STATE BUDGET

Health and Social Services	44.4%
Education	27.3%
Government Services	14.6%
Transportation	9.0%
Natural and Economic Resources	4.1%
Conservation	0.6%

MDC represents less than 1% of the total state budget

Total State Budget **\$24,031,415,726**

FISCAL YEAR 2013 SUMMARY

County Assistance Payments—\$1,639,888

Paid county levee and drainage district taxes, forest cropland payments, in lieu of real estate taxes, and county aid road trust payments. Since 1980, paid more than \$17.5 million to Missouri counties in lieu of real estate taxes.

Capital Improvements—\$14,844,254

Constructed, renovated, and repaired fish hatcheries, river accesses, wetlands, shooting ranges, nature centers, and facilities statewide; and acquired land.

Fisheries—\$13,243,735 Managed sport fish populations, aquatic biodiversity, and aquatic habitats. Managed 1,014 areas for fishing, and assisted 5,446 landowners with stream and lake management. Stocked about 5.1 million fish in public waters.

Forestry—\$18,342,297 Distributed about 3 million seedlings to 10,700 landowners, provided forestry assistance on more than 75,614 acres of private land and to more than 140 municipalities, managed 438,700 acres of public forest, monitored insect and disease threats, and facilitated development of the state's forest industry.

Wildlife—\$20,023,939 Managed more than 182,000 acres of public land. Monitored federally endangered or threatened species. Identified priority geographies to focus investments. Aided guidance and funding for national and international bird conservation. Facilitated about 50,000 hunter trips through managed hunts.

Outreach and Education—\$15,274,280

Nearly 800,000 visited nature centers and shooting ranges, more than 500,000 subscribed to the *Missouri Conservationist*, more than

(continued on Page 28)

FISCAL YEAR 2013 SUMMARY

(continued from Page 27)

120,000 subscribed to *Xplor*, and more than 5.5 million visited MDC's website. Also provided more than \$200,000 in grants to schools, conservation curriculums for schools, outdoor skills programs, and hunter education.

Private Land Services—\$8,858,706

Provided 31,400 rural and urban landowner contacts; affected 280,155 acres through technical assistance to landowners; provided habitat management workshops to 40,486; assisted USDA with enrolling 90,000 acres of cropland reflooding in the Migratory Bird Habitat Initiative; and assisted 5,607 landowners with nuisance wildlife.

Protection—\$15,864,335 Provided wildlife law enforcement in every county as well as resource management, information, education, and public service. Conservation agents contacted approximately 710,000 people, and they coordinated the Share the Harvest program. Conservation agents, along with 1,067 volunteers donating 11,000 hours, conducted 974 hunter education classes, certifying 24,151 students.

Resource Science—\$11,365,690 Monitored the status of Missouri's fish, forests, plants, and wildlife, recommended conservation actions, evaluated these actions, and reported the results. Tens of thousands of Missourians were contacted to determine their outdoor activities and opinions about conservation programs.

Regional Public Contact Offices—\$2,197,119

Provided regional offices to directly serve Missourians.

Administrative Services—\$24,808,373

Paid for hunting and fishing permit sale systems, fiscal services, purchasing, distribution center, and sign shop. Provided agency-wide postage and printing services, fleet management, vehicle and equipment maintenance, and other agency appropriations. Includes information management and technology that supported all computers, software, telephones, and other telecommunications systems.

Human Resources—\$2,402,906

Provided the services to recruit, employ, and train employees.

Design and Development—\$12,016,123

Provided engineering, architectural design, cultural resource review, surveying, and construction, as well as maintenance of conservation areas and facilities.

Administration—\$3,013,005 Provided audits, legal counsel, strategic planning coordination, federal reimbursement administration, environmental policy development, public involvement, and river basin management.

Conservation Goals and Priorities

The Department developed goals and priorities for fiscal years 2013 and 2014 to serve as an annual strategic plan to address the most important conservation challenges within the next few years. To increase communication of the goals and priorities, a brochure and video presentation were prepared. View the video at youtube.com/watch?v=LrqZNPjy4sw.

CITIZEN INVOLVEMENT/EDUCATION

Social Media

The Department's Facebook page has more than 52,000 likes and reaches almost 39,000 people per week who share our information with more than 5.5 million friends. Our Twitter feed has more than 4,100 followers, and our YouTube channels contain more than 1,000 videos and average about 100,000 views per month with more than 8 million total views.

Discover Nature Schools

Discover Nature Schools helps teachers engage students in hands-on, outdoor learning from kindergarten through high school and are in 70 percent of Missouri school districts. Conservation grants supporting Discover Nature Schools totaled \$250,641. In 2013, teachers were introduced to the Discover Nature Schools Science Fair initiative.

Habitat-Management Workshops

The Department held or participated in more than 727 habitat management workshops for more than 38,000 private landowners. Workshops focused on techniques to benefit early successional wildlife such as quail, rabbits, and grassland birds.

Forest Management for Landowners

The Department provided forest management on-site technical assistance to 1,566 landowners statewide impacting 75,614 acres. A total of 356 plans covering 33,685 acres were written. In addition 74 private land timber sales were marked and 189 landowners were referred to a forest consultant.

Revised *Paddler's Guide to Missouri*

The Department's revised *Paddler's Guide to Missouri* features 58 rivers and streams. It has been one of the Department's best-selling books since its release in 1965. Each waterway includes easy-to-read maps, descriptions of access points, camping, state parks, and conservation areas along the way.

Landowner-Led Habitat Cooperatives

The Department and nongovernment organizations provided 45 wildlife and habitat cooperatives with information through workshops and educational meetings in fiscal year 2013.



The Department held or participated in 727 habitat management workshops to help landowners manage their land for early successional wildlife.

Listened to Missourians

Part of delivering excellent public service is to listen and understand Missourians. In fiscal year 2013, there were 53 activities that involved 83,802 people. These included surveys, focus groups, open houses, comments, and presentations to the Regulations Committee, and contacts with the Department's ombudsman.

ENGAGE PARTNERS AT ALL LEVELS

County Aid Road Trust

The County Aid Road Trust program enables the Department to cost share maintenance of roads accessing Department areas with 39 counties and other local governments. The program provided about \$530,000 statewide last fiscal year.

Volunteer Fire Departments

The Department, in cooperation with the U.S. Forest Service, provided \$354,467 in grants to 182 volunteer fire departments. Equipment was also provided to fire departments through two federal programs. Through the Federal Excess Property Program we obtained equipment valued at \$3,383,794. The new Fire Fighter Program obtained equipment valued at \$2,040,321.

Share the Harvest

Conservation agents coordinate and support the Share the Harvest program with the Conservation Federation of Missouri, local charitable organizations, and local meat processors. In 2012, approximately 6,244 hunters donated 318,115 pounds of venison to less-fortunate Missourians.

New Fishing Platform at Bennett Spring

A disabled accessible fishing platform was constructed at Bennett Spring on the east side of the stream just below the dam, and another new fishing platform was built directly across the stream. The Missouri Conservation Heritage Foundation raised more than \$60,000 from local businesses and organizations to fund this project.

Archery in the Schools

Missouri National Archery in the Schools (MoNASP) is coordinated through the Department and the Conservation Federation of Missouri. MoNASP is an affiliate of NASP and promotes education, self-esteem, and physical activity through archery to more than 63,000 Missouri students in 290 schools statewide. The Department co-hosted the NASP World Tournament in June 2013 in St. Louis — the first one held in Missouri. A total of 3,045 students participated, representing 22 states and two Canadian provinces. ▲

Yellow-bellied Sapsucker

Look for this rare winter treat as you hike Missouri's woods this season.

THE YELLOW-BELLIED SAPSUCKER (*Sphyrapicus varius*) is listed as a rare winter visitor to Missouri so I was quite surprised when I spotted one at Shaw Nature Reserve in Franklin County on a bitterly cold New Year's Day morning. The lone male was high in a persimmon tree, its bill covered with the reddish-orange pulp of the tree's grainy fruit. My first thought was "downy woodpecker" as I dropped my tripod and camera from my shoulder to the frozen ground, but I soon realized my mistake as I dialed the smallish bird into focus with my 500mm lens. The long, white stripe along the woodpecker's wing revealed its true identity as a yellow-bellied sapsucker.

I'm usually not so adept at recognizing uncommon birds without help from a field guide, but I had already used my references to identify another yellow-bellied sapsucker, a juvenile, at our farm a year earlier. The somewhat nondescript woodpecker was plucking tiny blue cones from a cedar tree near our house and its unusual appearance caught my attention. After I identified it as a yellow-bellied sapsucker, I couldn't wait to tell my friends at work about the sighting. Little did I know that a year later I would be face to face with a striking, adult male with a crimson throat and tawny-yellow belly. I felt like I had struck woodpecker gold on that icy holiday morning, and I quickly got down to the business of documenting my good fortune.

The yellow-bellied sapsucker, more common in Missouri during its spring and fall migration, can be found in parks and forests feeding on insects, fruits, nuts, and berries. The sapsucker is known for drilling orderly rows of holes, called sap wells, in trees to access nourishing sap, which also attracts insects as a bonus food source. Territorial, like most other woodpeckers, the yellow-bellied sapsucker defends its sap wells against other birds and even small mammals. It is easy to spot a tree where the fastidious sapsucker has been at work, as shown in the inset photo.

If you spy a suspected yellow-bellied sapsucker on your own hikes or birding expeditions, be careful to rule out the downy woodpecker and hairy woodpecker, which are similar in appearance but have clean, white underparts and lack the white wing stripe of the yellow-bellied sapsucker. Also, male downy and hairy woodpeckers do not have the red throat of the male sapsucker.

I spent about an hour photographing the lonely sapsucker as it fed on persimmons. The busy male stayed high in the crown of the tree, leaving me no choice but to shoot upward toward the severe sky of winter. The resulting images featured the brightly colored woodpecker in stark contrast with the white canvas above. At first, I was unhappy with the images but later I warmed to their uniqueness. Over the years, I've learned to make the best out of each situation when photographing Missouri's wildlife and this cold-weather sapsucker was yet another challenge.

—Story and photos by Danny Brown

📷 500mm lens + 1.4 teleconverter • f/5.6 • 1/1000 sec • ISO 400

We help people discover nature through our online field guide. Visit mdc.mo.gov/node/73 to learn more about Missouri's plants and animals.





Eagle Bluffs Conservation Area

Managed and maintained especially for water-loving birds, this area in central Missouri features seasonal waterfowl in winning wetlands.

THIS BOONE COUNTY area is 4,431 acres of wetland wonderland. Eagle Bluffs Conservation Area (CA), maintained especially for wetlands and the birds that inhabit them, is a must-visit for Missouri's wildlife lovers.

A wetland-dominant area, Eagle Bluffs CA's waters are surrounded by tracts of forest and cropland. With more than 10 miles of stream-front land, the area's wetlands and waterfowl can be viewed from shores, hiking trails, and viewing and hunting blinds.

The Audubon Society designated Eagle Bluffs CA as an Important Bird Area for the essential habitat it provides, making it a bird-watching hotspot. Shorebirds frequent the area during the April–June and August–September, while ducks and geese are present from October through May. Abundant river timber creates habitat attractive to migrant and resident songbirds.

The area can also be viewed from three different hiking trails. One trail branches off of the Katy Trail, which passes through a portion of the area and allows access to a bluff-top observation deck. This trail is extremely steep but worth the amazing view from the top. Eagle Bluffs CA's own hiking trails are 3 miles and 1.6 miles long and begin at the river parking lot.

While no camping is permitted on the area, people traveling the Missouri River by boat may camp within 100 yards of the river between April 1 and Sept. 30. The Missouri River and Perche Creek offer fishing opportunities for catfish, carp, buffalo, and drum. Hunting prospects include archery deer, dove, rabbit, squirrel, and waterfowl in season. Waterfowl hunters must obtain a daily waterfowl-



Trumpeter swan

500mm lens +2.0x teleconverter • f/11 • 1/320 sec • ISO 200

hunting permit at the draw held each morning approximately two hours before sunrise; 80 percent of waterfowl hunting is allocated by the Quick Draw system.

Wetland management is key for Eagle Bluffs CA. Its 17 wetland pools allow the flooding of 1,100 acres of marshes and crop fields. The area's wetland-management infrastructure includes 30 miles of levees, 61 water-control structures, river-water supply pumps, pump-out facilities, and a pipeline linking the area to the City of Columbia. A cooperative agreement between the Department and Columbia enables the Department to use treated wastewater from the city as a primary water source for the wetlands, providing nearly constant water flow that can be supplemented by river pumps when necessary.

—Rebecca Martin, photo by Noppadol Paothong



Recreation opportunities: Bird watching, boat-in camping, hiking, hunting in season, nature viewing

Unique features: This area features scenic bluffs, ample opportunities for waterfowl hunting and viewing, and extensive wetland habitat.

For More Information Call 573-445-3882 or visit mdc.mo.gov/a8931.

DISCOVER nature

5

IDEAS FOR FAMILY FUN

To find more events near you, call your regional office (see Page 3), or visit mdc.mo.gov and choose your region.

METALLIC AND SHOTGUN SHELL RELOADING BASICS

JAN. 18 • SATURDAY • 8:30–11:30 A.M.

Southwest Region, Andy Dalton Shooting Range and Outdoor Education Center, 4897 N. Farm Road 61, Ash Grove, MO 65604

To register, call 417-742-4361

Reloading shotgun shells and bullets is both an enjoyable and inexpensive way to get ammunition for hunting or target shooting. Department staff will demonstrate

how to reload rifle, pistol, and shotgun ammunition. The class will also cover brass care, bullet selection, and primer selection.

BACKYARD MAPLE SUGARING

JAN. 23 • THURSDAY • 10 A.M.–2 P.M.

JAN. 25 • SATURDAY • 10 A.M.–2 P.M.

St. Louis Region, Rockwoods Reservation, 2751 Glencoe Rd., Wildwood, MO 63038

Reservations begin Jan. 9, call 636-458-2236
Adults

Develop your own backyard maple syrup operation, from tree identification to cooking. Learn new technology that increases sap production and makes sap collection easier.

WINTER BIRDS AT DUCK CREEK

JAN. 25 • SATURDAY • 10 A.M.–3:30 P.M.

Southeast Region, Duck Creek Conservation Area

Reservations begin Jan. 2, call 573-290-5218
Ages 8 and up

We will explore the back roads and wetlands to find some of the “hot spots” for birds such as overwintering waterfowl. Bring binoculars or borrow a pair of ours. The main entrance for the area is 9 miles north of Puxico on Highway 51.

LARGE MAMMALS

JAN. 25 • SATURDAY • 1–2:30 P.M.

Kansas City Region, Burr Oak Woods Conservation Nature Center,

1401 NW Park Rd., Blue Springs, MO 64015

All Ages

Join us as we learn about magnificent large mammals, such as black bears, mountain lions, and elk.

EAGLE DAYS

JAN. 25 • SATURDAY • 9 A.M.–4 P.M.

JAN. 26 • SUNDAY • 10 A.M.–3 P.M.

Northeast Region, Lock & Dam 24 at Clarksville

No registration • All ages

The Department will help visitors watch eagles and migrating waterfowl. The U.S. Army Corps of Engineers maintains a bonfire to keep the chill off. The Apple Shed Theater will host an hourly live eagle program, hands-on exhibits, kids’ activities, and the Department video *Where Eagles Soar*. The building is not heated, so dress warmly.



DISCOVER NATURE PHOTO CONTEST

Send us your best images of what discovering nature means to you for our new photo contest. New for this year, people can submit entries through the social network of their choice (Instagram, Facebook, Twitter, Google+, etc.). When you want to submit a photo through a social network, use the hashtag “#MDCdiscovernature.” For a full list of rules, and to see all submissions gathered together on a tagboard, just navigate to our discover nature contest website: mdc.mo.gov/node/16689. Department staff will select a winner every month and display it on our website. All of the monthly winners will appear in the January 2015 issue of the magazine.





Subscribe online • mdc.mo.gov/node/9087 • Free to Missouri households



I Am Conservation

Trapper Clay McDaniel sets a trap for bobcats on a farm near Belle, Mo. The lifelong Belle resident got started trapping at a very young age while accompanying his grandfather as he checked his rabbit trap line. "When I was in grade school, I got to go on my first river trap line with my best friend," says McDaniel. "He and I continued to set our own trap lines on Dry Fork Creek in our teenage years." McDaniel says he really got serious about trapping a few years ago when his cousin invited him along on a trapping run on Christmas morning. "When I saw a bobcat in one of his traps, I was hooked," says McDaniel. Since then, McDaniel has become very active in the Missouri Trappers Association (MTA), of which he previously served as district director. He conducts a trapping clinic, sponsored by the MTA, every year near Belle. McDaniel will typically trap at least 30 nights in a season. "When I have my whole line up and running, I will be checking 50–75 sets daily," says McDaniel. He is also passing along the tradition to his youngest son, Gus, who caught his first coyote last season. "Trapping is important in controlling the furbearer and predator populations," says McDaniel. "I feel it is very important to carry on that way of life," he added, "not only by practicing it, but also teaching it." —*photo by David Stonner*